New York State Department of Transportation
Yellow Flag NB22U4W001

By: Malav Shah
Flag Date: November 08, 2022

Superseding Information:
No Flags Superseded

Structure Information

BIN: **1065318**
Feature Carried: 278I278IX2M23027
Feature Crossed: 6TH AVENUE
Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY
County: KINGS
Political Unit: City of NEW YORK
Approximate Year Built: 1962

Posted Load Matches Inventory : Yes
Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.
Date: November 21, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Malav Shah, P.E. 106620-1
Date: November 29, 2022

Reviewed By: Robert Kemp
Date: November 29, 2022

Attachments: 10

Flagged Elements

Parent Element	Element	Total Quantity	Unit
	Span Number : 168		
	107 - Steel Open Girder/Beam	729	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

This Yellow Flag No. NB22U4W001 is NEW.

Location: Span 168, Girder G11 at Pier 167 located within scaffolding platforms installed by contractor which is located above parking lot between 38th and 39th Street.

Description:

The Girder G11 end at Pier 167 exhibits severe section loss with 0.3" – 0.475” remaining thickness measured (RTM) in the lower girder web in bearing area above bottom flange resulting in approximately 48% section loss. (Sketch 1, Photos 6, 8 & 9). Additionally, the bottom flange of the girder exhibits 30% to 45% section loss for 68"L for the full width of the flange (Sketch 1 & 2, Photo 8 & 9).

Although the overall shear web area section loss is approximately only 10%, the overall bearing area web section loss is approximately 48%. (refer to Yellow Flag Condition Sketch 1, Photo #2 for more details)

This is a newly flagged condition.

Notes:
1. Adjacent Girder G10 exhibits 34% section loss in the web area directly above the bearing. The lower web above the bottom flange exhibits up to 25% section loss The remaining web height exhibits up to 15% section loss along the guide angle.

2. Adjacent Girder G12 exhibits up to 15% section loss along the guide angle and in the web area above bearing.

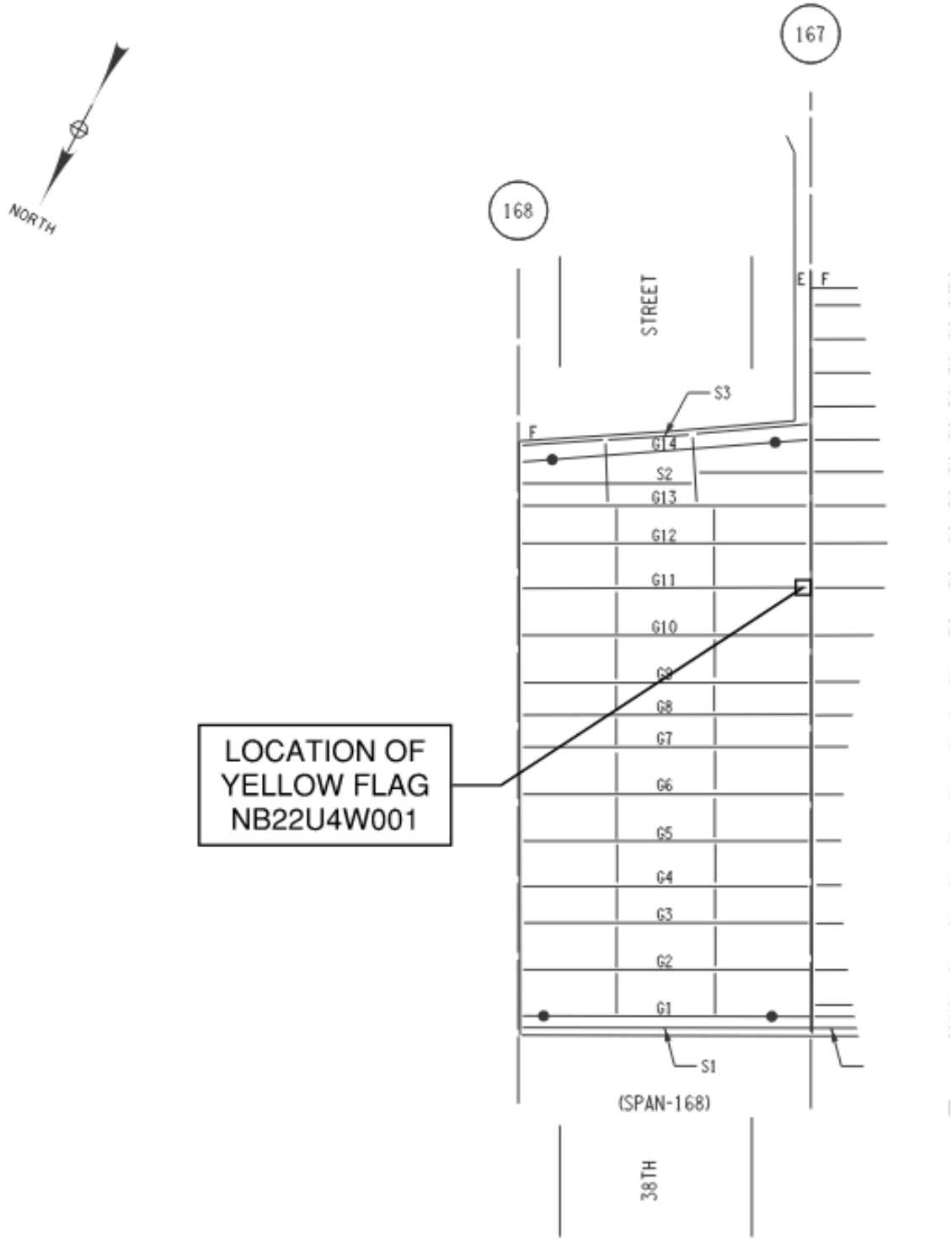
3. The bearing under Girder G11 exhibits 15% section loss to the bearing components.

4. Scaffolding platform was installed by contract within span at the time of inspection so single lane closure in the right lane on 3rd Avenue WB between 36th and 39th streets with 60 ft bucket truck was used to access platform.

5. The previous 2021 Biennial Report documented the above bearing location as CS3 with the following condition state note:
Girder G11 exhibits an average localized section loss of 47% at the lower web for 10” high above the bottom flange with up to 20% section loss. The overall web bearing area section loss is approximately 35%.

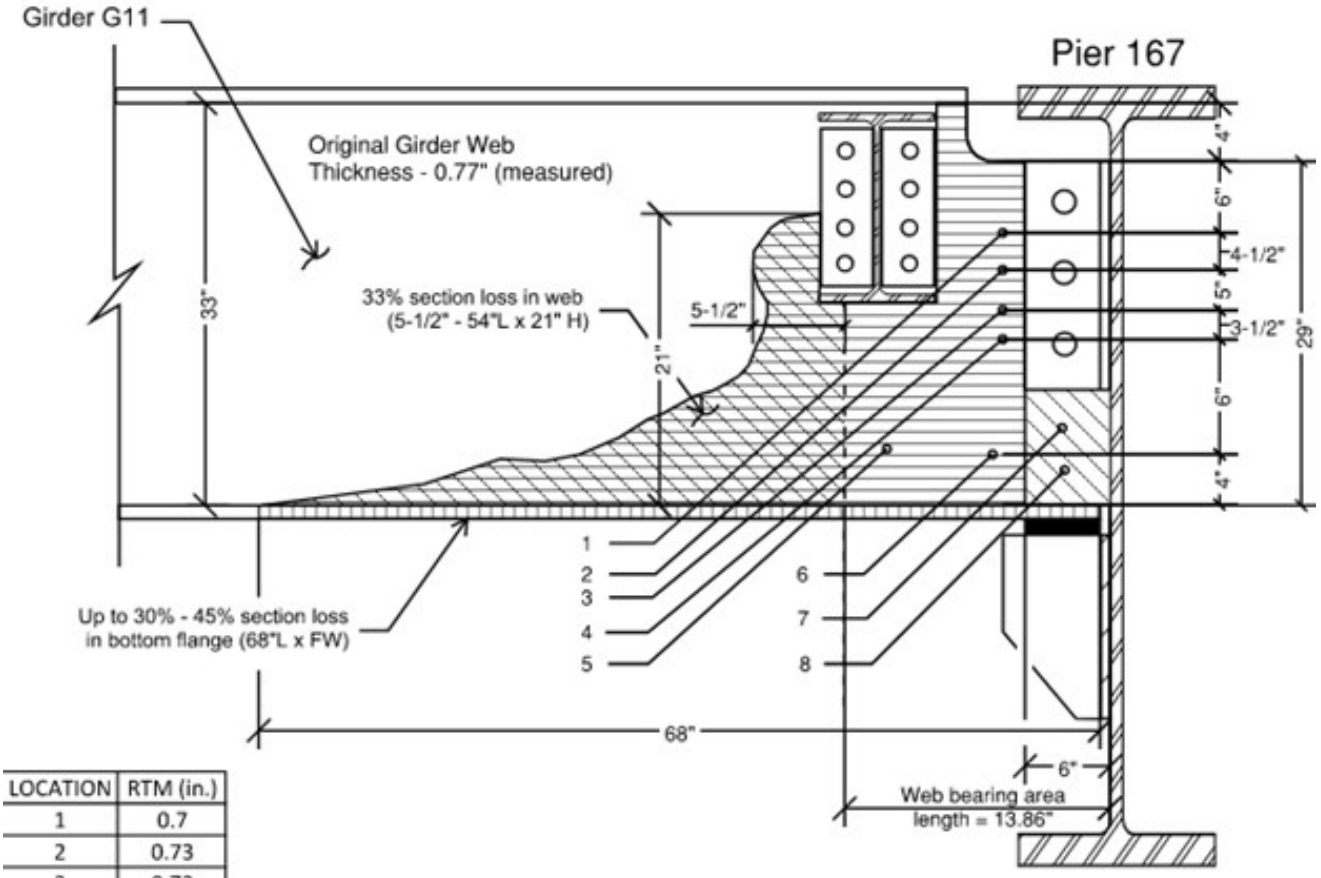
Flag Photographs

Photo Number: **1** Photo Filename: **FRAMING PLAN.png**



Attachment Description: **YELLOW FLAG LOCATION PLAN**

Photo Number: **2** Photo Filename: **SKETCH 1_R.jpg**



LOCATION	RTM (in.)
1	0.7
2	0.73
3	0.73
4	0.68
5	0.32
6	0.63
7	0.32
8	0.28

SPAN 168, GIRDER 11 AT PIER 167
LEFT FACE (LOOKING RIGHT)
N.T.S

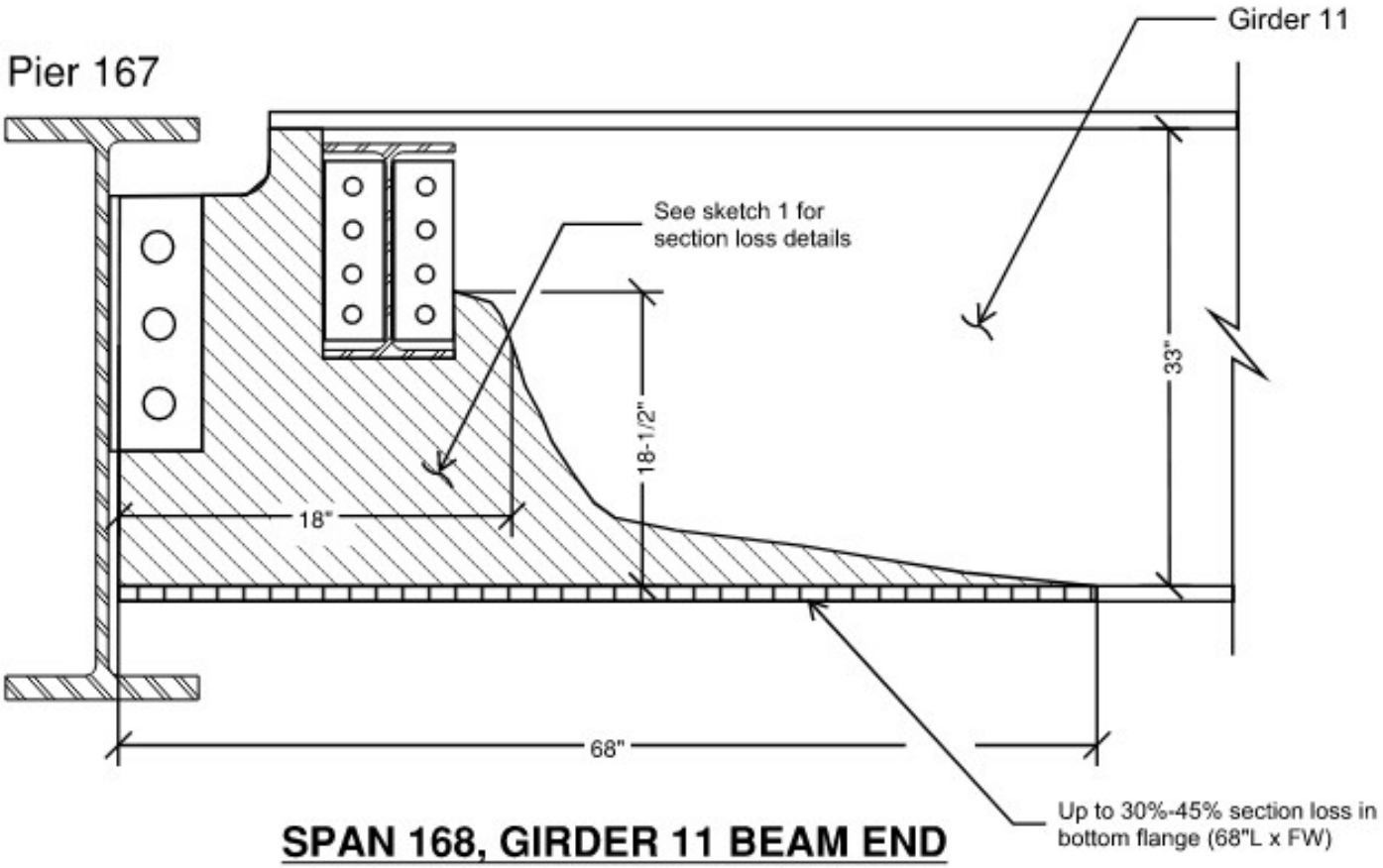
TRIBUTARY LENGTH CALC. FOR SHEAR AREA			
	ABOVE (in.)	BELOW (in.)	TOTAL (in.)
FOR POINT 1	6	2.25	8.25
FOR POINT 2	2.25	2.5	4.75
FOR POINT 3	2.5	1.75	4.25
FOR POINT 4	1.75	3	4.75
FOR POINT 6	3	4	7

Section Loss Calculations:

Original girder web thickness = 0.77" (measured)
Localized section loss in web area above bearing = (0.77" - 0.3")/0.77" x 100 = 61% section loss
Web bearing area length = 18 x 0.77" = 13.86"
Web bearing area = [{ ((0.32+0.28)/2) x 6"}] + [{((0.32+0.63)/2) } x 7.86"] = 5.53 in²
Overall web bearing area section loss = [{ (13.86" x 0.77") - 5.53 in² } / (13.86" x 0.77")] x 100 = 48% section loss
Shear web area = (0.7" x 8.25") + (0.73" x 4.75") + (0.73" x 4.25") + (0.68" x 4.75") + (0.63" x 7") = 19.985 in² ~ Say **20 in²**
Overall shear web area section = [(0.77" x 29") - 20 in²] / (0.77" x 29") x 100% = 10.4% section loss

Attachment Description: **YELLOW FLAG CONDITION SKETCH 1**

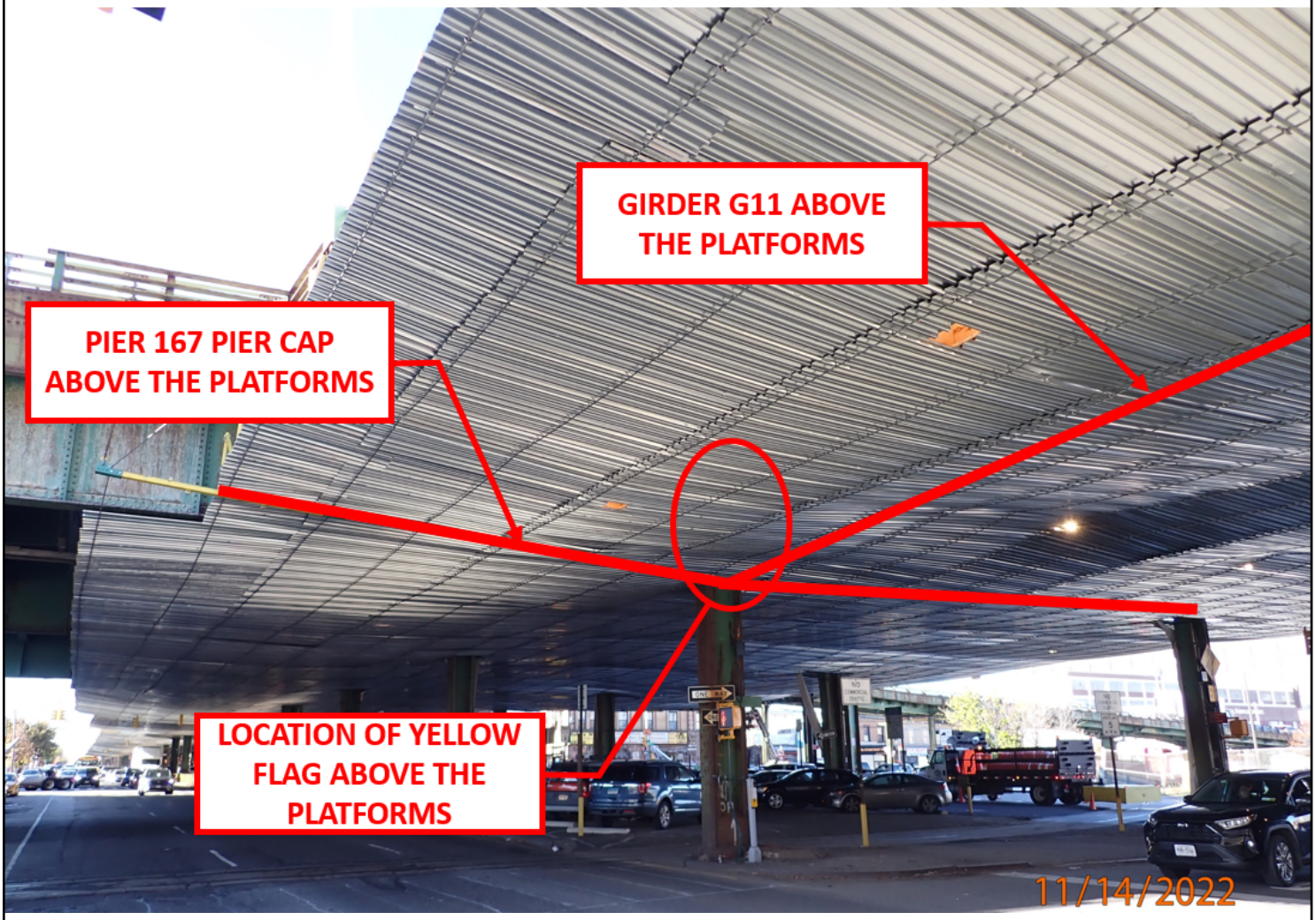
Photo Number: **3** Photo Filename: **SKETCH 2.jpg**



SPAN 168, GIRDER 11 BEAM END
RIGHT FACE (LOOKING LEFT)
N.T.S

Attachment Description: **YELLOW FLAG CONDITION SKETCH 2**

Photo Number: **4** Photo Filename: **GENERAL VIEW.PNG**



Attachment Description: **General view of flagged condition at Girder G11 in Span 168 at Pier 167 (located above the installed shielding platform). Looking Begin - Left**

Photo Number: **5** Photo Filename: **G11 GV_LF.PNG**

Attachment Description: **General view of Girder G11 in Span 168 at Pier 167. Looking Begin and Right.**

Photo Number: **6** Photo Filename: **G11 GV_RF.PNG**

Attachment Description: **General view of Girder G11 in Span 168 at Pier 167. Looking Begin and Left.**

Photo Number: **7** Photo Filename: **G11_LF.PNG**

Attachment Description: **Close-up general view of Girder G11 in Span 168 at Pier 167. The end of Girder G11 exhibits severe section loss (approximately 48% section loss) in the lower girder web bearing area above the bottom flange. Additionally, the bottom flange of the girder exhibits 30% to 45% section loss for 68"L for the full width of the flange. Looking Right.**

Photo Number: **8** Photo Filename: **G11_RF.PNG**

Attachment Description: **Close-up general view of Girder G11 in Span 168 at Pier 167. The end of Girder G11 exhibits severe section loss (approximately 48% section loss) in the lower girder web bearing area above the bottom flange. Additionally, the bottom flange of the girder exhibits 30% to 45% section loss for 68"L for the full width of the flange. Looking Left.**

Photo Number: **9** Photo Filename: **G11 CLOSE UP VIEW_LF.PNG**

Attachment Description: **The Girder G11 End exhibits severe section loss (approximately 48% section loss) in the lower girder web in bearing area above bottom flange. The bottom flange of the girder on left face exhibits 30% to 45% section loss for 68"L for the full width of the flange. Looking Right.**

Photo Number: **10** Photo Filename: **G11 CLOSE UP VIEW_RF.PNG**

Attachment Description: **The end of Girder G11 exhibits severe section loss (approximately 48% section loss) in the lower girder web in bearing area above bottom flange. The bottom flange of the girder on left face exhibits 30% to 45% section loss for 68"L for the full width of the flange. Looking Left.**